

JULY 1958 — 15
VOLUME 84

NO. SA4
PART 2

Your attention is invited

**NEWS
OF THE
SANITARY
ENGINEERING
DIVISION
OF
ASCE**



JOURNAL OF THE SANITARY ENGINEERING DIVISION
PROCEEDINGS OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS

THE
OF THE
SOCIETY
OF THE
SOCIETY
OF THE
SOCIETY

DIVISION ACTIVITIES

SANITARY ENGINEERING DIVISION

Proceedings of the American Society of Civil Engineers

NEWS

July, 1958

EARLY PUBLICATION OF MANUALS OF PRACTICE IN SANITARY ENGINEERING REQUESTED

The Executive Committee of the Sanitary Engineering Division has requested early publication by the Society of the Manuals of Practice on Sanitary and Storm Sewer Design and Construction, Sewage Treatment Plant Design, and Sanitary Landfill Practice. This action was taken by the Executive Committee at its meeting in Memphis, Tennessee, on April 30, 1958.

HYDRAULICS CONFERENCE SCHEDULED FOR ATLANTA

The Hydraulics Division of the Society will hold its seventh Hydraulics Conference in Atlanta on August 20, 22, 1958. The program is one which will appeal to all civil engineers who are interested in theoretical or applied hydraulics and hydrology. Registration forms will be included with the final program announcement in Civil Engineering for August.

MANUAL ON INCINERATOR DESIGN NOW AVAILABLE

The publication of Municipal Incinerator Design, a Survey of Engineering Practices has now been announced. The thirty-four page booklet was prepared by the Solid Wastes Engineering Section, Committee on Sanitary Engineering Research, A.S.C.E., in cooperation with the Public Health Service. Data on the newest or best plants in 102 cities were analyzed to determine construction trends, responsibility for plant construction, types of material accepted, design data on grates, loading factors and furnace, flue chamber and stack ratios.

DID YOU KNOW THAT

Dr. Harold J. Paulus has joined the faculty of the University of Minnesota School of Public Health as Associate Professor of Public Health Engineering. He will devote his activities to teaching and research in the field of air

Note: No. 1958-15 is part of the copyrighted Journal of the Sanitary Engineering Division, Proceedings of the American Society of Civil Engineers, Vol. 84, SA 4, July, 1958.

Copyright 1958 by the American Society of Civil Engineers.

pollution control. Dr. Paulus received his Ph.D. degree from the University of Iowa in 1941 and has specialized in the fields of sanitary chemistry and engineering. After four years service in the Sanitary Corps of the Army during World War II, he did air and water pollution work in connection with synthetic rubber plants operated by the RFC. Since 1947 he has been engaged in air pollution and industrial hygiene work with the Public Health Service in Cincinnati, Ohio.

Leo Louis, Vice President and General Manager, Gary-Hobart Water Company, Gary, Indiana, was elected President of the Northwest Branch, Indiana Section, A.S.C.E. Art Arndt of the American Bridge Company was elected Vice President. Both men are members of the Sanitary Engineering Division.

John E. Kiker has been installed as State Director and Thomas deS. Furman as Secretary-Treasurer of a newly formed North-Central Chapter of the Florida Engineering Society, state affiliate of the National Society of Professional Engineers.

Maurice LeBosquet, an Assistant Chief of the Public Health Service's Water Supply and Water Pollution Control Program has been reassigned as Chief Sanitary Engineer, Technical Cooperation Mission to India. He will be attached to the Public Health Staff of the Mission in New Delhi.

NATIONAL CONFERENCE OF STATE SANITARY ENGINEERS

The 35th meeting of the Conference of State Sanitary Engineers was held in Washington, D. C. on May 6-9. Subject matter considered included radiological health, air pollution, water resources, water supply, water pollution control, and recruitment and training of environmental sanitation personnel. Resolutions passed which will be of interest to sanitary engineers are summarized as follows:

Recruitment and Training

Accepted and endorsed report of the Committee on Sanitary Engineering and Environment of the National Academy of Sciences-National Research Council entitled "Education, Training and Utilization of Sanitary Engineers."

Recommendations of Joint Federal-State Action Committee

Expressed its emphatic disapproval of the recommendations of the Joint Federal-State Action Committee which proposes to terminate the Federal grant program for waste treatment works construction authorized by the Federal Water Pollution Control Act.

Public Facility Loans

Fully endorsed the provisions of H.R. 11902, dealing with Public Facility Loans, particularly the provisions of Sec. 202 which vests in the Surgeon General of the Public Health Service functions dealing with health, refuse disposal, sewage treatment, and water purification.

Increasing Amount of Federal Funds for Sewage Treatment Works

Fully endorsed provisions of H.R. 11714, which would increase the total annual appropriation authorization in support of municipal sewage treatment

works construction, increase maximum grant provisions, authorize municipalities to band together in constructing projects, and permit reallocation of unobligated funds.

Indian Sanitation Legislation

Recommended that the Association of State and Territorial Health Officers support passage of pending legislation which would authorize the Public Health Service to provide domestic and community sanitary facilities for Indians and natives of Alaska.

Milk Sanitation

Took a positive position to the effect that Federal milk sanitation legislation should include the following principles: (1) a declaration by the Congress that the sanitary control of fluid milk and fluid milk products is a public health matter and is the responsibility of States and their political subdivisions, (2) authorize the Public Health Service to conduct research and to provide technical services and training in support of State and local milk sanitation programs, and (3) require the Public Health Service to administer a voluntary program for certification of the sanitary quality of fluid milk and fluid milk products shipped in interstate commerce, in cooperation with the States and the milk industry.

Air Pollution

Recommended the extension of the Air Pollution Research and Technical Assistance Act in which the appropriation authorization expires June 30, 1960; and that the present ceiling limitation on annual appropriation of \$5 million be removed.

Criteria for Measurement and Evaluation of Contaminants

Asked that the Surgeon General of the Public Health Service be requested to assemble, as early as is practical, a committee of the Conference of State Sanitary Engineers to develop and clear a position of the Conference with respect to the changing character and complexity of contaminants now reaching the environment and the lack of established mechanisms for the measurement and evaluation of these contaminants.

Water Pollution Research Program

Recommended that the total level of research activity on water pollution problems be at least doubled by 1960 and increased thereafter as conditions dictate.

Transportation of Radioactive Substances

Requested the Surgeon General to review with the Interstate Commerce Commission and other appropriate agencies; including the armed services, safety standards for transportation of radioactive substances with the objectives of promoting the adoption of all possible safety precautions on a Federal level and of recommending to the States the enactment of such regulations and the adoption of such procedures as may be deemed necessary to prevent and control accidents in transportation.

METROPOLITAN PLANNING CONFERENCE

The role of the civil engineer in city and metropolitan planning was emphasized at the Conference on Metropolitan Planning held at the University of Florida, March 11-15, 1958, sponsored by the College of Engineering and the Engineering and Industrial Experiment Station. The five-day program covered fully the various branches of civil engineering—sanitary engineering on Tuesday, structural engineering on Wednesday, highways on Thursday, and surveying and mapping on Friday and Saturday. In all, 36 speakers discussed a wide variety of problems associated with the demands of effective metropolitan planning.

The change from rural to metropolitan areas creates sanitary engineering problems of water supply, sewage and waste treatment, and necessitates the protection of recreational areas. Professor Ralph W. Kluge, Head Professor of Civil Engineering, gave the keynote speech stressing the contributions of civil engineering as indispensable in all phases of planning for metropolitan growth.

At the session on Tuesday devoted to sanitary engineering problems in metropolitan planning, Roy F. West (Roy F. Weston, Inc., Consulting Engineers, Newtown Square, Pennsylvania) pointed out that it is comparatively easy to devise a good plan for a community but it is extremely difficult to get the members of the community to adhere to the plan once it is adopted.

Ralph E. Fuhrman, Executive Secretary of the Federation of Sewage and Industrial Wastes Associations, made some pertinent observations on the major problem in metropolitan growth created by suburbs. In many cases, he said, these areas are somewhat parasitical, obtaining many of the benefits from the city they adjoin yet paying none of the taxes which make these benefits possible.

At this same session Professor John E. Kiker of the Civil Engineering Department spoke on the problems of water supply provisions for rapidly expanding areas. Here, more than with other sanitary services, long-range planning and great vision unhampered by immediate political considerations are necessary if adequate supplies of water are to be available to meet the future needs of expanding communities.

Dr. E. R. Hendrickson, Associate Professor of Civil Engineering, pointed out that community pollution includes contamination of air in metropolitan areas. Thus, there is a need for careful and thoughtful planning of industrial operations, as well as household heating and combustion of wastes, to eliminate possibilities of noxious effects of air pollution.

-Sanitary Engineering Quarterly
University of Florida (April, 1958)

SANITARY ENGINEERING EDUCATION

UNIVERSITY OF NORTH CAROLINA INAUGURATES DOCTORAL PROGRAM IN SANITARY SCIENCE AND ENGINEERING

The University of North Carolina announces the inauguration of a course of study in the Department of Sanitary Engineering of the School of Public Health leading to the Doctor of Philosophy degree. A master's degree program in sanitary engineering has been offered at UNC since 1920.

Candidates for the doctorate must have completed a master's degree program in Sanitary Engineering, Sanitary Science, or Sanitary Chemistry and Biology at the University of North Carolina or an equivalent program at another institution.

The major fields of study include water supply and treatment, waste treatment and disposal, environmental sanitation, and atmospheric pollution control. Minor fields may be in chemistry or the biological sciences.

Graduate teaching and research assistantships, research associateships, and fellowships are available to qualified students. Information may be obtained from the DEPARTMENT OF SANITARY ENGINEERING, P. O. BOX 899, CHAPEL HILL, N. C.

RICE INSTITUTE OFFERS GRADUATE WORK IN SANITARY ENGINEERING

The Rice Institute, Houston, Texas, has announced that it is now offering graduate work in sanitary engineering, leading to the Master of Science Degree. This work is given under the auspices of the Department of Civil Engineering. Students may participate in research activities on a part-time basis during the school term and full time in the summer. Graduate assistantships providing exemption from all fees and carrying a minimum stipend of \$1500 for the academic session are available. Summer employment is at commensurate salaries. Further information may be obtained by writing: A. W. Busch, Assistant Professor, Department of Civil Engineering, the Rice Institute, Houston 1, Texas.

SANITARY ENGINEERING FILM NOW AVAILABLE

"Engineering Your Health," is a 16 mm., 13-1/2 minute, sound, color movie, produced for the Engineering Resources Program, and is designed to acquaint freshman and sophomore engineering college students with the work of sanitary engineers. The film is also good for junior and senior high school students, science teachers, vocational guidance counselors, PTA groups, civic clubs, and educational TV. The film is forward-looking rather than historical in content. It describes the problems, the needs, and the research and operational aspects of the Division of Sanitary Engineering Services programs in water pollution control and water resources, atmospheric pollution research, and radiological health. Also included are references to the various outlets in sanitary engineering, such as teaching, travel, research, and operations. The film will be available from Film Library, CDC, Atlanta, Ga.; SEC; or the various Regional Engineers beginning May 1.

UNIVERSITY OF MINNESOTA OFFERS GRADUATE WORK IN AIR POLLUTION CONTROL

The School of Public Health of the University of Minnesota is presently organizing courses in the field of air pollution and will offer specialization in air pollution work at the graduate level. A candidate for the Master of Public Health degree who wishes to specialize in air pollution will be expected to spend approximately one-third of his time on general public health courses and the other two-thirds in air pollution control, and elective work in meteorology and mechanical engineering. A specific program can be designed to meet the needs of the individual student. Dr. Harold J. Paulus will direct this phase of the public health program.

In the summer of 1958 the University plans to offer a workshop in Air Pollution for the two-week period August 4-August 15. This workshop will carry three University credits and will be open to properly qualified physicians, engineers, chemists and other sanitation personnel.

UNIVERSITY OF NORTH CAROLINA IMPLEMENTS AIR POLLUTION CURRICULUM

The School of Public Health of the University of North Carolina, Chapel Hill, North Carolina, announces the implementation of its course of study in air pollution. This will be under the Department of Sanitary Engineering which has a grant from the Community Air Pollution Program of the U. S. Public Health Service. Instruction will be under Dr. Lyman A. Ripperton, recently appointed to the School's faculty from the Los Angeles Air Pollution Control District, and Prof. Emil T. Chanlett. The concentration of course work in air pollution, offered in fulfillment of the Master's degree, is open to sanitary scientists and to sanitary engineers.

SANITARY ENGINEERING RESEARCH

RESEARCH FACILITY GRANTS FOR SANITARY ENGINEERING

The Health Research Facilities Act of 1956 authorizes the appropriation of Federal funds not to exceed \$30 million for each of three years to assist in the construction and/or equipping of facilities for research in the sciences related to health. This assistance is in the form of grants-in-aid to public and nonprofit institutions on the basis of not more than 50 per cent for the Federal share. Schools of public health and engineering and public institutions conducting research in the field of sanitary engineering have participated in this program. A resume of grants awarded to date is presented as follows:

University of Michigan - School of Public Health

Awarded \$662,750 for the consolidation and expansion of existing facilities. Research work will be expanded in pioneering studies of community air pollution, the control and use of water resources, the satisfactory disposal of the waste products of community and industrial activity, food processing and handling, and the peacetime use of atomic energy.

California Department of Public Health

Awarded \$600,000 for the expansions of existing facilities. These added facilities will permit studies of the physical and chemical properties of particulate air pollutants, investigation of eye irritants, and studies of methods for measuring organic pollutants of the atmosphere.

University of Florida - College of Engineering

Awarded \$23,350 for the expansion of the Sanitary Engineering Laboratory. This addition will provide more space for the bacteriological, radiological, air pollution, and chemical research laboratories.

Georgia Institute of Technology

Awarded \$125,000 toward the construction of a radioisotopes and bioengineering building. This will permit the expansion of existing research facilities and consolidate activities presently scattered throughout several locations.

Washington State College - Division of Industrial Research

Awarded \$13,869 toward the purchase of scientific equipment for research in pulp mill air pollution control.

Washington University - School of Engineering (St. Louis, Mo.)

Awarded \$25,599 toward the construction of a sanitary engineering laboratory and the purchase of necessary scientific equipment. This laboratory will be a part of a new Engineering Laboratory. It will permit more efficient use of present equipment and the installation of equipment required for research projects on pressing stream pollution problems of the Missouri area. Plans are being prepared for future research in the field of air pollution.

University of Iowa - School of Engineering

Awarded \$12,000 toward the expansion and equipping of existing facilities. This construction will consolidate all of the Sewage and Industrial Waste Research Laboratory in one building. Studies will be carried on to develop more economical methods for treating industrial wastes to assist industrial plants to accomplish waste treatment and yet remain competitive in their respective fields.

WATER SUPPLY AND WATER POLLUTION CONTROL

The Rigors of Rumination

Oft have I pondered my own grey matter,
disturbed by the incessant clatter
of program worries and other great concerns
such as Imhoff tanks built like Grecian urns,
and the palid pinkness of my memo file
and the B.O.D. of the Egyptian Nile,
while with the arms of a trickling filter, jousting,
exceeding Don Quixote's novel bouting,
I conjure spurious data for pedestrian papers
to be read at conventions 'mid martini-induced capers,
Alas for the heroics, they're confined to the dark
or the Tunnel of Love in the amusement park!
for, more than death or taxes, sewage is certain,
an aspect of life behind discretion's curtain,
symbol of society's mundane modernity
and the engineers' sanitary paternity!

-Publius Gracchus who in a fit of
despondency conceived the sewer

DISCONTINUANCE OF USE OF RED LEAD PAINTS FOR WATER TANKS RECOMMENDED

The Chairman of the Elevated Tank and Standpipe Committee of the AWWA, has recommended to a State Health Department discontinuing use of red lead linseed oil paints for the interiors of potable water tanks. He indicated that the AWWA Committee will recommend substitution of paints containing zinc pigments and also paints containing lead pigments with vehicles other than linseed oil, such as the red lead vinyls and red lead phenolics, for this purpose.

STATE FINANCIAL AID FOR WATER DISTRICTS

The passage of the \$200-million Texas State Water Bond Amendment means the State can soon be ready to help cities and water districts to finance their projects. The enabling act goes into effect automatically as soon as the vote is canvassed. The Governor is to appoint the six members of the Water Development Board from the fields of engineering, business, law, farming, and public or private financing. Any political subdivision having a project which it cannot finance can borrow from the State to the extent of one-third of the total cost, but not over \$5 million. The amendment authorizes the first \$100 million and empowers the Legislature to approve another \$100 million when needed.

STUDIES OF UNDERGROUND WATER RESERVOIRS AUTHORIZED

The New Jersey Senate has passed a bill appropriating \$100,000 for experimentation with "underground reservoir" water storage. The funds would be used to buy land near Princeton, for testing a theory that a type of "spongy" earth can be used to store water and can "recharge" itself when water is drawn off. It is claimed this practice has been successful in several Western States and that it would obviate the need of buying expensive surface reservoir sites. Under the bill, the \$100,000 would be reimbursed to the State from proceeds of a \$43-million water bond issue referendum to be placed on the November ballot.

FUNGI DEVELOPED FOR CONVERSION OF SULPHITE LIQUOR SUGAR

A fermentation utilizing a pure strain of fungus has been developed at the Taft Sanitary Engineering Center which converts waste sulphite liquor sugar to fumaric acid. In initial laboratory experiments, 60 per cent reduction of sugar has been obtained (53 per cent B.O.D. reduction), with 35 per cent of utilized sugar converted to fumaric acid. Application has been made for a patent. Further investigation of the process is being directed toward evaluating its economic feasibility. The sulphite liquor treated by this process is an important waste discharged by pulp and paper mills.

RESEARCH ON CHEESE PLANT WASTE

The Vermont Water Conservation Board is sponsoring a research project on the disposal of whey, which is a by-product in the manufacture of cheese. The research on this State-wide problem in the water pollution control

program will be conducted at the Vermont Agricultural Experiment Station of the University of Vermont to determine the value of whey on solids and crops by utilizing spray and other types of irrigation. Under the terms of the agreement, other methods of disposal which may appear adaptable to Vermont conditions will also be explored.

VESSEL WASTE PROBLEM CONSIDERED BY INTERNATIONAL JOINT COMMISSION

Under the References of the Governments of the United States and Canada of 1946, the International Joint Commission reported in 1951 on pollution of boundary waters and recommended certain measures for the control of pollution including that contributed by vessels. On February 20, 1958, the regulatory authorities and vessel owners and operators were asked to attend a meeting of the International Joint Commission in Detroit when the actions taken to date and future remedial actions contemplated were to be discussed. Voluntary cooperation of the U. S. vessel transportation industry has normally sufficed to assure compliance with all of our requirements. However, the Interstate Quarantine Regulations do not cover the installation of sewage treatment units or retention tanks aboard vessels. It was indicated that when overboard discharge of wastes from vessels on the Great Lakes adversely affects the quality of overboard water in lake areas presently used as water sources for vessels, or when local control agencies cannot provide adequate protection of local water works intakes due to such pollution, the degree of shipboard sewage treatment or the method of handling to be provided on vessels will be considered for incorporation in the Regulations.

VOLUNTARY CERTIFICATION PROGRAM FOR SEWAGE TREATMENT PLANT OPERATORS

The Certification Committee of the New England Sewage and Industrial Wastes Association has already started the program for the voluntary certification of sewage treatment plant operators. The purpose of the program is to promote the employment of trained, experienced, reliable and efficient personnel for the operation of public and industrial sewage treatment works. Twenty-four applications have been received to date and the first written examination for Grades III through VI will be held on June 4 in Gardner, Mass., as part of the Spring Meeting of the Association.

CONFERENCE OF SURGEON GENERAL WITH STATE AND INTERSTATE WATER POLLUTION CONTROL ADMINISTRATORS

Fifty-seven State and interstate water pollution control administrators met with the Surgeon General on February 19-21 to discuss policy and procedural relationships in the administration of P. L. 660. Among those presenting papers at the meeting with Dr. Thomas Parran, former Surgeon General and present Dean of the School of Public Health, University of Pittsburgh; and Hon. Robert P. Weatherford, Mayor of Independence, Missouri. Professor Gerald Rohlich, University of Wisconsin, led a panel discussion on research in water pollution.

The State and interstate administrators passed resolutions requesting a review of program grants under Section 5 of P. L. 660 recommending that

sewage treatment works be given high priority in any Federal aid program of public works and recommending that the level of research activity be at least doubled by 1960 and increased thereafter as conditions warrant.

Mr. Curtiss M. Everts, Jr., of Oregon, was selected Chairman of a standing committee to work with the Public Health Service in planning future meetings with the State and interstate administrators.

Arkansas-Red River Basins Water Quality Conservation Study

An interim report on the first phase of the Ark-Red River study reveals that mineral deterioration of water quality in the Red River starts in New Mexico, while in the Arkansas River it begins in the vicinity of Hutchinson, Kansas; major amounts of mineralization are being contributed by ground flow accretion to tributaries of both rivers; early 1900 records show high-quality water in reaches now seriously deteriorated; some fields contribute seriously to chloride and sulfate pollution (particularly in Oklahoma and Western Texas as a result of inadequate brine disposal and poor housekeeping of leases).

INTERSTATE WATER POLLUTION CONFERENCES

Mississippi River-St. Louis Metropolitan Area

On March 4 a conference under the provisions of P. L. 660 was held at St. Louis, Missouri, on pollution of interstate waters of the Mississippi River, St. Louis Metropolitan Area. Representatives of the Illinois State Sanitary Water Board, Missouri Division of Health, Bi-State Development Agency, Public Health Service, and many industries, municipalities, and conservation groups participated. The conference was given extensive front-page newspaper, radio, and television coverage. The conferees established a time schedule for remedial facilities to abate pollution by the Metropolitan St. Louis Sewer District (including the City of St. Louis and all municipalities and industries in St. Louis County, Missouri) and the municipalities and industries on the Illinois side of the river. The conferees also requested the City of St. Louis to make a study of methods to be used. If grinding and disposal to the River is to be continued, an adequate justification must be presented.

Animas River

A conference called under the provisions of the Federal Water Pollution Control Act, on the interstate water of the Animas River (Colorado-New Mexico), was held in Santa Fe, N. Mex., on April 29, 1958. Uranium milling operations in Colorado are reported to be endangering the public water supplies in New Mexico. Representatives of Colorado, New Mexico, the Atomic Energy Commission, and the Public Health Service participated in the conference, and representatives of the water pollution control agencies of Arizona and Utah attended as observers. This is the first time that action—State or Federal—has been taken to abate pollution resulting from radioactive material. The States of Colorado and New Mexico and the Public Health Service agreed to embark on an extensive study which would thoroughly analyze the problem. As soon as the study group can come to definite conclusions and recommendations, another session of the conference will be called so that

the conferees may decide whether to adopt such conclusions and recommendations.

Missouri River

A conference on pollution of the interstate waters of the Missouri River involving sources from Gavins Point Dam, S. Dak., to Omaha, Nebr., will be held in Sioux City, Iowa, on July 24, 1958. The conferees will consist of representatives of the water pollution control agencies of South Dakota, Iowa, Nebraska, Missouri, Kansas, and the Public Health Service.

PROGRAM OF FEDERAL GRANTS FOR SEWAGE TREATMENT WORKS MOVES AHEAD

On May 14, over 1,000 sewage treatment works projects had received Federal grant offers of about \$85 million under the Federal Water Pollution Control Act. The estimated total cost of these projects is approximately \$390 million. Local communities participating in this program will provide \$3.6 for each dollar of Federal aid.

Except for a temporary lag during the early stages of the program, there has been a steady increase in the rate of construction following the first grant awards. Final contract award data for 1957 show an increase of about 40 per cent in the annual rate of construction of sewage treatment works during the first full year of operation under the construction grants program over the five-year annual average for the period 1952 through 1956.

Contract awards during the first four months of 1958 exceeded awards for the same period in 1957 by 50 per cent.

STATE FINANCIAL AID PROGRAMS FOR THE CONSTRUCTION OF SEWAGE TREATMENT WORKS

Since the enactment of the new Federal water pollution control Act, three States have passed legislation providing State grants in support of sewage treatment plant construction. Actions taken were:

1. Maine appropriated \$836,000 for the two fiscal years ending June 30, 1959, authorizing the State Water Improvement Commission to pay up to 20 per cent of the total cost of needed projects, or 2/3 of the Federal contribution under P. L. 660.
 2. Vermont established a fund of \$1,000,000 by State bond issue to encourage water pollution control at the local level through State aid for the construction of sewage treatment plants by municipalities. Grants of 20 per cent of the cost of construction were authorized.
 3. The Maryland legislature authorized a fund of \$5,000,000 (to be established by State loan) to be used to supplement grants made under P. L. 660.
- In addition in 1957 three other States passed legislation to aid communities in constructing sewage treatment works as follows:
1. New Mexico provided modest grant-in-aid support for meeting the construction needs of unincorporated municipalities.
 2. Ohio made funds available for planning grants.

3. New Hampshire raised the ceiling on loan guarantees in previous legislation.

Prior to 1957, California, Oregon and Pennsylvania inaugurated State financial aid programs involving loans; state purchase of municipal bonds; and annual payments for operation, maintenance, and replacement.

AIR POLLUTION

NEW YORK-NEW JERSEY AIR POLLUTION STUDY REPORT IS RELEASED

The Interstate Sanitation Commission recently released a report entitled, "Smoke and Air Pollution—New York New Jersey." This report describes the results of a two-year study of the New York-New Jersey metropolitan area air pollution problem. The study was jointly financed by New York and New Jersey, and by a Public Health Service Air Pollution Demonstration Project Grant, with technical assistance from the Public Health Service, U. S. Army Chemical Corps, Weather Bureau and the National Bureau of Standards. The investigation was under the technical direction of Dr. Louis C. McCabe with full time assistance from Mr. William H. McGonnell of the Public Health Service. The 95-page illustrated report discusses the background of the study, meteorology, climatology and topography; results of recent air pollution studies; findings of tracer tests and air sampling; effects of air pollution on health, vegetation, and property; and evaluation of air pollution legislation.

NATIONAL ADVISORY COMMITTEE ON COMMUNITY AIR POLLUTION

The relationship of automobile exhaust to the problem of air pollution in the United States cities was reviewed in detail in February by the National Advisory Committee on Community Air Pollution with the Surgeon General and members of his staff. The Committee emphasized the need for more knowledge of the concentrations of air pollutants in all cities across the country; agreed that there is an urgent need for more research on the various aspects of the problem of auto exhaust; and recommended closer liaison and more exchange of technical data information between industry and government. Also needed, the Committee said, was an increased understanding by the public of the problems of air pollution in our cities.

SECOND AIR POLLUTION RESEARCH PLANNING SEMINAR

Proceedings of the Second Air Pollution Research Planning Seminar will be published in May and distributed to interested physicians, engineers, and scientists. The Seminar, held at the Robert A. Taft Sanitary Engineering Center in Cincinnati, Ohio, during February, was organized for the purpose of planning research into the causes, effects, and control of air pollution. Nearly 200 specialists representing universities, industry, research foundations, consulting firms, and State, Local, and Federal agencies attended. Panel groups discussed air pollution research in terms of: (1) effects on enzyme systems, cell cultures, and tissues; (2) effects on man and the intact experimental animal; (3) effects on lung physiology; (4) possible relationship to cancer; (5) relationship to eye irritation; (6) relationship to allergy; (7) community health studies; (8) aerosols; (9) agriculture; (10) chemistry; (11) engineering; (12) instrumentation; and (13) meteorology.

SURGEON GENERAL'S CONFERENCE ON AIR POLLUTION

Surgeon General Burney has scheduled a national conference on the problem of community air pollution to be held in Washington, D. C., this fall. Conference membership will include engineers, physicians, scientists, and administrators drawn from all levels of government, from industry, educational institutions, and from research and professional organizations. One of the primary purposes of the conference will be to make a much needed currently valid, overall appraisal of the extent and severity of the air pollution problem as it effects urban, metropolitan, and regional areas throughout the nation.

NUCLEAR ENERGY**KENTUCKY ESTABLISHES ADVISORY COMMITTEE ON NUCLEAR ENERGY**

New legislation in Kentucky (Senate Bill # 166, approved April 1, 1958) establishes an Advisory Committee on Nuclear Energy attached to the Department of Economic Development.

The functions of the Committee are to advise and coordinate with the Governor in respect to atomic energy developments. The Committee will evaluate studies, proposals and recommendations of the several departments and agencies within the State. It will also act as an advisory and coordinating group in the development and regulatory activities of the State relating to nuclear energy, including cooperation with the States and with the Federal government.

THE EXPANDING ATOMIC ENERGY INDUSTRY

"Careers in Atomic Energy," is the title of a booklet published recently by the Office of Education, Department of Health, Education, and Welfare describing the increasing uses of nuclear energy and related job opportunities and training programs. At least 1,000 industrial plants in the Nation use radioisotopes in manufacturing processes and the eight national Atomic Energy Commission laboratories employ about 16,500 persons. The Oak Ridge National Laboratory in Tennessee shipped 12,585 packages of radioisotopes to 2,360 institutions in every State and territory and 46 foreign countries in 1955. About 7,000 persons are employed directly by the Atomic Energy Commission and more than 90,000 others are hired by contractors with the AEC. It is estimated that by 1980 about 67 per cent of the new electric generating capacity added yearly in the United States will be nuclear. In addition to industry and power, the fields of medicine, biology and agriculture are included in the booklet.

NATIONAL ADVISORY COMMITTEE ON RADIATION

The Surgeon General recently announced the appointment of a National Advisory Committee on Radiation. The Committee, under the chairmanship of Dr. Russell H. Morgan, Professor of Radiology, John Hopkins University School of Medicine, held its first meeting in March. In announcing establishment of the Committee, Dr. Burney said that "the development of adequate

safeguards against the hazards of radiation must be regarded as an increasingly important public health responsibility." Committee members come from the fields of general medicine, clinical radiology, genetics, radiobiology, radiation physics, sanitary engineering, public health, and industry.

PUBLIC HEALTH SERVICE CREATES NEW DIVISION OF RADIOLOGICAL HEALTH

The creation of a new Division of Radiological Health in the Public Health Service was announced by Marion B. Folsom, Secretary, Department of Health, Education, and Welfare on March 28, 1958. The new Division will provide technical assistance to State agencies in dealing with medical, industrial, and other activities involving public exposure to radiation, and will also conduct research and training programs. Chief of the new Division will be Dr. Francis J. Weber, a career officer in the Service and at present Medical Director of the Department's Denver Regional Office, covering Colorado, Utah, Wyoming, Montana, and Idaho. James G. Terrill, Jr., will be Assistant Chief; Dr. Donald R. Chadwick, Chief Program Operations Branch; Ernest C. Anderson, Chief, Special Projects Branch; Dr. Arthur H. Wolff, Chief, Training Branch; and Robert C. Coulter, Executive Officer. Until Dr. Weber assumes active direction of the new Division some time before July 1, the work of the new unit will be directed by Dr. Chadwick, Liaison Officer for Radiation in the Office of the Surgeon General.

The Division of Radiological Health will be an organizational part of the Bureau of State Services. Staff includes physicians, sanitary engineers, physicists, chemists, radiologists and other scientists who have previously been working in separate medical and engineering units of the Service.

* * * *

David H. Howells, EDITOR
Division Affairs Section, SED Journal
10126 Hereford Place, Silver Spring, Md.

ASSISTANT EDITORS

Professor Gilbert H. Dunstan
Dept. Civil Engineering
Washington State Inst. Technology
Pullman, Washington

Professor Thomas deS Furman
Dept. Civil Engineering
College of Engineering
University of Florida
Gainesville, Florida

Mr. D. G. Larkin
512 Sixteenth Street
Oakland 23, California

Mr. Walter A. Lyon
Acting Director, Division
of Sanitary Engineering
Pennsylvania Dept. Health
P. O. Box 90, Harrisburg, Pa.